Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A catalyst producing method comprising:

preparing a reverse micellar solution including an aqueous solution containing a precursor of ~~at least~~ a noble metal element as a catalytic active component;

reducing the noble metal precursor to a noble metal particle by adding a reducing agent to the reverse micellar solution; ~~, and~~

carrying the noble metal particle on ~~catalytic active component by~~ a substrate to ~~establish them into~~ form a catalyst precursor; and

spraying [[the]] an emulsion solution containing the catalyst precursor in an inert gas atmosphere to obtain a dried catalyst precursor, and firing the obtained dried catalyst precursor in an air atmosphere.

2. (Currently amended) The catalyst producing method as claimed in claim 1, wherein a molar ratio (RW) of water encapsulated in ~~the~~ a reverse micelle relative to a surfactant forming the reverse micelle is 20 or less.

3. (Previously presented) The catalyst producing method as claimed in claim 1, wherein the catalytic active component further includes at least one of a transition metal element and a rare earth element.

4. (Currently Amended) The catalyst producing method as claimed in claim 1, wherein the step of carrying comprises:

preparing a solution including a solvent ~~containing~~ and a ~~dispersed~~ powder of oxide forming the substrate; and

mixing the prepared solution and the ~~emulsion solution~~ reverse micellar solution containing the noble metal particle to carry the ~~catalytic active component by~~ noble metal particle on the substrate to thereby ~~establish them into~~ form the catalyst precursor.

5. (Currently Amended) The catalyst producing method as claimed in claim 1, wherein the step of carrying comprises:

preparing a hydroxide to be matured into an oxide forming the substrate; and

clathrating the noble metal particle ~~catalytic active component~~ contained in ~~the~~ a reverse micelle contained in the reverse micellar solution ~~emulsion solution~~ by the prepared hydroxide to carry the noble metal particle on ~~catalytic active component by~~ the substrate to thereby ~~establish them into~~ form the catalyst precursor.

6. (Currently Amended) The catalyst producing method as claimed in claim 1, wherein the noble metal element comprises at least one ~~noble metal element~~ selected from the group consisting of Ru, Rh, Pd, Ag, Ir, Pt, and Au.

7. (Currently Amended) The catalyst producing method as claimed in claim [[2]] 3, wherein the transition metal element comprises at least one ~~transition metal element~~ selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Zn.

8. (Currently Amended) The catalyst producing method as claimed in claim [[2]] 3, wherein the rare earth element comprises at least one of La and Ce.

9. (Previously Presented) A catalyst obtained by the catalyst producing method according to claim 1.

10. (Cancelled)

11. (New) A catalyst producing method comprising:

preparing a first reverse micellar solution including an aqueous solution containing a first precursor of a noble metal element as a catalytic active component;

reducing the noble metal precursor to a noble metal particle by adding a first reducing agent to the first reverse micellar solution;

preparing a second reverse micellar solution including an aqueous solution containing a second precursor of a transition metal element as the catalytic active component;

reducing the transition metal precursor to a transition metal particle by adding a second reducing agent to the second reverse micellar solution;

mixing the first reverse micellar solution containing the noble metal particle and the second reverse micellar solution containing the transition metal particle to obtain a reverse micelle containing the noble metal particle and the transition metal particle;

carrying the noble metal particle and the transition metal particle on a substrate to form a catalyst precursor; and

spraying an emulsion solution containing the catalyst precursor in an inert gas atmosphere to obtain a dried catalyst precursor; and firing the obtained dried catalyst precursor in an air atmosphere.

12. (New) The catalyst producing method as claimed in claim 11, wherein a molar ration (RW) of water encapsulated in the reverse micelle relative to a surfactant forming the reverse micelle is 20 or less.

13. (New) The catalyst producing method as claimed in claim 11, wherein the catalytic active component further includes a rare earth element.

14. (New) The catalyst producing method as claimed in claim 11, wherein the carrying comprises:

preparing a solution including a solvent and powder of oxide forming the substrate; and

mixing the prepared solution and the reverse micellar solution containing the noble metal particle and the transition metal particle to carry the noble metal particle and the transition metal particle on the substrate to thereby form the catalyst precursor.

15. (New) The catalyst producing method as claimed in claim 11, wherein the carrying comprises:

preparing a hydroxide to be matured into an oxide forming the substrate; and

calthrating the noble metal particle and the transition metal particle contained in the reverse micelle by the prepared hydroxide to carry the noble metal particle and the transition metal particle on the substrate to thereby form the catalyst precursor.

16. (New) The catalyst producing method as claimed in claim 11, wherein the noble metal element comprises at least one selected from the group consisting of Ru, Rh, Pd, Ag, Ir, Pt and Au.

17. (New) The catalyst producing method as claimed in claim 11, wherein the transition metal element comprises at least one selected from the group consisting of Mn, Fe, Co, Ni, Cu, and Zn.

18. (New) The catalyst producing method as claimed in claim 13, wherein the rare earth element comprises at least one of La and Ce.

19. (New) A catalyst obtained by the catalyst producing method according to claim 11.